## PATENT CLAIMS

- 1. Etching solutions comprising hydrofluoric acid, an organic solvent, individually or as a mixture selected from the group consisting of ethylene glycol, propylene glycol, ethanol and glycerol, and water for the production of integrated circuits.
  - 2. Etching solutions according to Claim 1, comprising 10 5 20% by weight of hydrofluoric acid.
    - 3. Etching solutions according to Claim 1, comprising an organic solvent selected from the group consisting of ethylene glycol, propylene glycol, ethanol and glycerol.
  - (b) 4. Etching solutions according to Claim 1, comprising, as organic solvent, ethylene glycol and glycerol in a mixing ratio of from 1:10 to 10:1.

20

- 5. Etching solutions according to Claim 1, comprising, as organic solvent, ethylene glycol and glycerol in a mixing ratio of from 1:5 to 5:1.
- 25 6. Etching solutions according to Claims 1 to 5, comprising water in an amount of from 1 to 20% by weight.
  - 7. Etching solutions according to Claims 1 to 6, comprising a mixture of high-purity individual components.
- 8. Use of the etching solutions according to Claims 1 to 6 for the selective etching of doped silicate 35 layers.